DETAILED ACTION

1. This Office Action is responsive to the communication filed on 10/19/09

2. Claims 1-20 are pending for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

3. Claims 1, 3-4, 6-7, 9-10, 12-13, 15-16, 18-20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. the claims recite "the access request does not include data for generating a signal to be intended for waking up or sleeping the information processor." Examiner fails find such feature, explicitly or implicitly, stated in the applicant's written description.

According to the written description in paragraph 0053-0054, the written description only shows

> [0052] Assume that the power modes of the personal computer 520 is the power-saving operation mode. In this states, at SB1 shown in FIG. 4, the clients 300 among the **clients** 300_1 to 300_3 **issues to the gateway cared 510 a request for making access to the personal computer** 520 as an internal apparatus.
>
> [0053] At step SB2, the communication protocol controller 514 of the gateway card 510 **analyzes the protocol relating to the access request** from the client

> 300.sub.2. At step SB3, the communication protocol controller 514 returns a dummy response to the client 300.sub.2. At step SB4, the communication protocol controller 514 **decides whether the access request is a request for making access to the server**. In this example, the communication protocol controller 514 sets "No" as a result of the decision made at step SB4.
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> [0054] At step SB8 shown in FIG. 5, *the communication protocol controller 514 issues to the power controller 523 of the personal computer 520 a return request to return the power mode from the power-saving operation mode* to the normal operation mode.

Furthermore, in the applicant arguments filed on 10/19/2009, applicant has stated "when the external apparatus accesses to the gateway personal computer 500, for example, for requesting data stored therein and when the gateway card 510 acquires the data stored in the common HDD 540 from the personal computer 520, the gateway card conventionally needs at least a signal to be intended for waking up the personal computer. Thus it is not inherent … this type of access does not include data for generating a signal to be intended for waking up a server." Therefore, the recited limitation discussion above is neither teach nor inherent in the applicant's written description.

4. Claims 2, 5, 8, 11, 14, 17 are rejected as being dependent upon a rejected base claim under 35 U.S.C. 112, first paragraph, set forth in this Office action

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Admitted Prior Art ("AP") in view of Brabenac US Pub. No. 20020083351.

6. As per claim 1, AP teaches a gateway card that is connected to an information processor and that receives and transmits data between different networks [0006, 0007], the gateway card comprising:

an access accepting unit that accept an access request from an apparatus connected to one of the network; and

an access control unit that leads the apparatus to make access to an external apparatus connected to another one of the networks [*all the devices in home that have Internet connection function are connected to the gateway device (0007)*],

wherein the access control unit carries out a control to adjust a difference between communication protocols of the one of the networks and the another one of the networks [0006 – *What the gateway device does is that it adjusts differences in communication protocols between the network at home and external networks including the Internet*],

AP does not teach an access control unit that leads the apparatus to make access to an external apparatus in a state that the operation of the information processor is maintained in a power saving operation mode, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the external apparatus, wherein the access request does not include data for generating a signal to be intended for waking up or sleeping the information processor by the external apparatus.

The disadvantage of the AP gateway computer system is that the gateway computer system has to continuously connect to the Internet, the device needs to be turned on all the time to handle accesses from infrastructures outside/inside of home, so that the apparatus is always on, therefore increase power consumption.

Brabenac teaches a network adapter that is connected to an information processor [210 fig. 2] and that receives and transmits data between different computers [paragraph 0003], the network adapter comprising:

an access accepting unit [272] that accepts an access request from an apparatus [188] connected to a networks [160]; and

an access control unit [274] that leads the apparatus to make access to an external apparatus connected to the networks [paragraph 0003, 0033] and in a state that the operation of the information processor is maintained in a power saving operation mode [paragraph 0005], when the access request is accepted in a state that the operation of the information processor is in a power-saving operation mode and also when the access request corresponds to the access to the external apparatus,

> [0004] Since it is inefficient for a networked computer to waste its time and energy examining large numbers of packets for which it is not the intended destination, a networked computer typically offloads this function to a network adapter, through which the computer (called the host computer) attaches to the network. It is thus the job of the network adapter to examine each received packet, determine its intended destination, and present the received packet to the adapter's host computer only if the packet is intended for it. Otherwise, the network adapter merely discards the packet or forwards it through the network.
>
> [0005] In order to save electricity, the host computer typically enters a power-managed state when it is not receiving packets. During a power-managed state, the host computer uses less electricity by powering down or reducing electricity to selected computer components. When the network adapter detects a packet for which the host computer is the final destination, the adapter sends the host a wake-up signal, which causes the host to return to its operational working state, so that the host is capable of processing the received packet, and so that other hosts on the network can access its resources, such as web pages, files, printers, applications or services.
>
> [0026] Referring again to FIG. 2, program information 264 is used by controller 262 to program network adapter 150 to filter packets received from network 160. Upon receiving program information 264, network adapter 150 will send to host computer 110 only the packets that meet the criteria specified in program information 264. In one embodiment, program information 264 contains instructions capable of being executed by network adapter 150. In another embodiment, program 264 contains data identifying the port numbers of applications within computer 110. Program information 264 is further described with reference to FIGS. 3, 4, and 5.
>
> [0033] Pattern filter 274 interrogates the packets of information that are received by networking device 272 and forwards to port filter 276 only those packets containing data in selected fields that match data associated with computer 110. Examples of the selected fields are the network address and the protocol identifier, but any appropriate field or fields can be used. All other packets are either discarded or forwarded on to their proper destination on network 160.

wherein the access request does not include data for generating a signal to be intended for waking up or sleeping the information processor by the external apparatus [*paragraph 0033, 0034, 0036 – port filter determines whether the port number in the received packet matches the*

port number assigned to an application executing on host computer; thus, the packet does not does not include data for generating a signal to be intended for waking up or sleeping (magic packet or wake-up data sequence) the information processor].

In summary, Brabenac teaches, in order to save electricity, the host computer typically enters a power-managed state when it is not receiving packets. During a power managed state, the host computer uses less electricity by entering power reduce state and offloads the packet detection function to a network adapter coupled to the host computer. It is thus the job of the network adapter to examine each received packet, determine its intended destination by examining the port number in the received packet, and awake the host computer only if the packer is intended for the host computer, so that the host computer can process the received packet. Otherwise, the network adapter forwards the packets on to their proper destination on the network.

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of AP with the access control unit that leads the apparatus to make access request to an external apparatus in the state that the operation of information processor is maintained in a power saving operation mode wherein the access request does not include data for generating a signal to be intended for waking up or sleeping the information processor by the external apparatus as taught by Brabenac.

The motivation for doing so would have been to reduce power consumption in the gateway computer system.

7. As per claim 2, Brabenac teaches, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit leads the apparatus to make access to the information processor in a state that the operation mode is returned from the power saving operation mode to the normal operation mode [paragraph 0046-0047], and shifts the operation mode from the normal operation mode to the power saving operation mode after the access ends [paragraph 0044].

> [0046] FIG. 5 depicts a flowchart that describes a method at port filter 276, according to an embodiment of the invention. Control begins at block 500. Control then continues to block 510 where port filter 276 receives a directed packet from remote computer 188 via network 160, networking device 272, and pattern filter 274. Control then continues to block 520 where port filter 276 determines whether the port number in the received packet matches the port number assigned to an application executing on host computer 110. Port filter 276 carries out this determination using program information 264, which was previously loaded as described with reference to FIG. 4.
>
> [0047] If the determination at block 520 is true, then control continues to block 540 where port filter 276 sends a wake-up message to host computer 110. Control then continues to block 599 where the function returns.

8. As per claim 3, see discussion in claim 2.

9. As per claim 4, 5 and 6, it is directed to a method to implement the gateway card that is connected to an information processor as set for claim 1-3. Therefore, it is rejected on the same basis as set forth hereinabove.

10. As per claim 7, 8 and 9, , it is directed to a gateway control program to implement the gateway card that is connected to an information processor as set for claim 1-3. Therefore, it is rejected on the same basis as set forth hereinabove.

11. As per claim 10, it is noted that the limitation do not substantially differ from claim 1, with the exception of the limitation reciting "the information processor further includes a power control unit…" As demonstrated previously, AP modified by Brabenac anticipated the limitation in claim 1. The limitation regarding the information processor further includes a power control unit that shifts the operation mode from a normal operation mode to power saving operation mode, when a predetermined shift factor occurred is also anticipated by Brabenac as show in paragraph 0044, the controller 262 causes computer to enter a power managed state when there are no received packets.

12. As per claim 11, Brabenac teaches, when the access request is accepted in a state that the operation of the information processor is in a power saving operation mode and also when the access request corresponds to the access to the information processor, the access control unit issues a return notice to return the operation of the information processor from the power saving operation mode to the normal operation mode, then leads the apparatus to make access to the information processor [paragraph 0046-0047], and issues a shift notice to shift the operation mode from the normal operation mode to the power saving operation mode after the access ends [paragraph 0044 - inherent], and the power control unit [controller 262] returns the operation mode from the power saving operation mode to the normal operation mode based on the return notice, and shifts the operation mode from the normal operation mode to the power saving operation mode based on the shift notice [paragraph 0044].

13. As per claim 12, see discussion in claim 11.

14. As per claim 13, see discussion in claim 10.

15. As per claim 14, see discussion in claim 11.

16. As per claim 15, see discussion in claim 12.

17. As per claim 16, see discussion in claim 10.

18. As per claim 17, see discussion in claim 11.

19. As per claim 18, see discussion in claim 12.

20. Claims 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over AP in view of Brabenac and Dea.

21. As per claim 19, it is noted that the limitation do not substantially differ from claim 1, with the exception of the limitation reciting "a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode". As demonstrated previously, the combination of AP and Brabenac anticipated the limitations in claim 1.

The combine teachings of AP and Brabenac does not teach a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode.

Dea teaches another invention relates to efficient power management of computer and, more particularly, relates to systems and methods fore reducing power consumption of computers in computer networks. Specifically, Dea teaches a NIC card that interconnects an information processor [12 or 28 fig. 1; col. 5 lines 63-65], and at least one server via a first network [26 or 18 fig. 1], and at least one client via a second network [31 fig. 1], the information processor having a normal power mode and a power save mode [110 fig. 2, col. 6 line 1-7], the NIC card comprising:

an access accepting unit that accepts a request from the client to access the server or the information processor [col. 6 lines 7-9[1]];

a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode [col. 8 lines 17-19]; and

an access control unit that executes the request from the client wherein if the request from the client is a request to access the server, the access control unit executes the request even if the power mode checking unit determines that the information processor is in the power save mode [*The NIC card of system 12 or 28 would exam the request to determine whether the request is intended to interact with this particular station (col. 8 lines 8-16); and, if not, the information processor remains in the sleep or power-down state while inherently the access control unit executes to rout the request to it's intended target*[2]].

At the time of the invention was made, it would have been obvious to one of ordinary skill in the art to have modified the system of AP modified by Brabenac with the power mode checking unit that determines whether the information processor is in the normal power mode or in the power saving mode of Dea. The motivation for doing so would have been to assure that the information is ready to receive the access request when the control unit determined that the request is intended for the information processor.

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[1] Since Gateway 28 is preferably an individual computer serves to link LAN 32 to LAN 10 where LAN 10 may be coupled via communication link 24 through a subsystem control unit/communication controller 26 and communications link 34 to gateway server 28 OR computer system 12 serves to link server 18 [Mainframe computer col. 5 line 45] to client computer 31 through communication link 22. Therefore, the access accepting unit in the gateway card that interconnects an information processor [28 or 12 fig. 1] servers to accepts a request from the client [31 fig. 1] to access server [26, 18 fig. 1] or the information processor [28 or 12 of fig. 1].

[2] The Server 26, 18 would not able to receive the request if the gateway card of system 28 or 12 was not able to rout the request signal.

22. As per claim 20, it is noted that the limitation do not substantially differ from claim 19, with the exception of the limitation reciting "if the request from the client is a request to access the information processor and, if the power mode checking unit determines that the information processor is in the power save mode, the access control unit instructs the information processor to change the power mode to the normal power mode, executes the request, and instructs the information processor to change the power mode to the power save mode." As demonstrated previously, the combination of AP and Brabenac anticipated the limitations in claim 19.

The limitation regarding the claimed limitation above is also anticipated, as Brabenac teaches, if the request from the client is a request to access the information processor, the access control unit instructs the information processor to change the power mode to the normal power mode, executes the request, and instructs the information processor to change the power mode to the power save mode [see discussion in claim 2]. Dea also teaches the same limitation - a power mode checking unit that determines whether the information processor is in the normal power mode or in the power save mode [col. 8 lines 17-19]; and an access control unit that executes the request from the client wherein if the request from the client is a request to access the information processor [162 fig. 4] and, if the power mode checking unit determined that the information processor is in the power save mode, the access control unit instructs the information processor to change the power mode to the normal power mode[170 fig. 4].

Response to Arguments

23. Applicant's arguments with respect to claims 1-20 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to VINCENT T. TRAN whose telephone number is (571)272-7210. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas c. Lee can be reached on (57 1)272-3667. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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